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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,711	04/20/2004	Nathaniel R. Quick	2004-0018	5440

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EXAMINER

TOLAN, EDWARD THOMAS

ART UNIT PAPER NUMBER

3725

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SN

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,711	<b>Applicant(s)</b> QUICK ET AL.	
	<b>Examiner</b> Tolan Edward	<b>Art Unit</b> 3725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-24 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borodin (4,872,923) in view of Ohkawa et al. (5,149,681). Borodin discloses a method of drawing wire having a first diameter to a wire having a second diameter by feeding the wire at first velocity through rollers (22,24) and at a second velocity through rollers (28,30) in order to stretch draw the wire. The wire is heated in between roller pairs by heater (14). Borodin does not disclose that the heater is a laser. Ohkawa teaches (fig.5, column 7, lines 30-40 and column 10, lines 18-32) that it is known to use a laser to heat a composite wire as it drawn through a tube (52) by a variable speed motor (60). It would have been obvious to one skilled in the art at the time of invention to heat the wire of Borodin with a laser as taught by Ohkawa in order to heat a wire portion with greater area and temperature control. The skilled artisan would have been motivated to use a more precise heating tool than the burners of Borodin to provide better process control of the drawing.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borodin (4,872,923) in view of Ohkawa et al. (5,149,681) and further in view of Seuntjens (6,610,930). Borodin discloses a method of drawing wire having a first

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diameter to a wire having a second diameter by feeding the wire at first velocity through rollers (22,24) and at a second velocity through rollers (28,30) in order to stretch draw the wire. The wire is heated in between roller pairs by heater (14). Borodin does not disclose that the heater is a laser. Ohkawa teaches (fig.5, column 7, lines 30-40 and column 10, lines 18-32) that it is known to use a laser to heat a composite wire as it drawn through a tube (52) by a variable speed motor (60). It would have been obvious to one skilled in the art at the time of invention to heat the wire of Borodin with a laser as taught by Ohkawa in order to heat a wire portion with greater area and temperature control.

Borodin in view of Ohkawa does not disclose that the wire is gold that it drawn to twenty-five microns in diameter. Seuntjens teaches that it is known to draw a gold wire (column 4, lines 4-13) to between 15 and 75 microns. It would have been obvious to one skilled in the art at the time of invention to draw gold wire to a small diameter as taught by Seuntjens by the controllable process of Borodin in view of Ohkawa.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 703-305-3021.

EDTOLAN  
PRIMARY EXAMINER  
